31 January 2000

Simplified Procedure For LENA Testing

Initial Start-up

1. Setting Up GSEOS for monitoring. If, at some point a problem develops, try the following procedure. This part should not, in general, have to be done.
    a. On LENA machine 2 (room 148), go to D:\GSEOS4.0\prj\image\run
    b. look for GSEOS.ini, which is the major configuration file
    c. open by double clicking
    d. check for:
        i. In the "[Bios]" section, check for simulation=Ground
        ii. In the "[Recorder]" section, check for Data Path=D:\GSEOS4.0\prj\image\run\Lena\data\... (rest will change, for example for the January 2000 full functional tests FFT_Jan2000)
        iii. Save as itself (as a text file, not word)

2. Doubleclick GSEOS (Image V2.0 [Image V2.1 for the LENA-1 machine])

3. Make connection
    a. Goto Tools-NET
    b. Click on appropriate client (e.g. FEDS5). In the event it is not known what the correct client is, contact Brent Parker or the SMOC (x61180) for the information.
    c. click connect
    d. click Net Enable

4. Goto Message Screen

    Message screen says "connected" (along with some other messages) **PASS_____**

5. Turn on recorder
    a. Goto Tools-Recorder
    b. Click on "file"
    c. Check the box at the right
    d. Select the location of the recorder files (\Lena\data\FFT_Jan2000)
    e. Click status ON – Click edit recording list
    c. Check for "TLM" in "selected" panel
    d. If it is not present, click it and then hit "Add"

    "TLM" is selected **PASS_____**

    e. Hit OK to exit box
    f. Hit record

Script lena_on_amb

1. Authorize LENA command C_SI_LENA_PWR_ON

2. Goto Normal HK Screen. Check:

LENA's software version is 31	**PASS_____**
LENA's program mode is "RAM"	**PASS_____**

3. Goto ptest screen

Check status of Critical HK (should pass)	**PASS_____**
Check status of TOF overcount (should pass)	**PASS_____**
Check status of Memory (should pass)	**PASS_____**

4. Note that the TOF subsystem test will probably fail and the two HVPS tests are not executed.

Script lena_hvramp_amb

1. Authorize LENA command L_SYS_HVP_VTHR to set the high voltage thresholds

2. Goto diagnos.scr (probably part of HK screen)

MCP start, stop, collimator (plus and minus), and optics voltage thresholds read decimal 128	**PASS_____**

3. Authorize LENA command L_SYS_HVP_ITHR to set the current thresholds

4. Goto diagnis.scr (probably part of HK screen)

MCP start, stop, collimator (plus and minus), and optics current thresholds read decimal 128	**PASS_____**

5. Authorize LENA command L_HVP_MSTR_CMD to command the MCP start to level zero.

Check to make sure the number of sent commands has incremented by one	**PASS_____**

6. Authorize LENA command L_HVP_MSTP_CMD to command the MCP stop to level zero.

Check to make sure the number of sent commands has incremented by one **PASS_____**

7. Authorize LENA command L_HVP_OPT_CMD to command the optics to level zero.

Check to make sure the number of sent commands has incremented by one **PASS_____**

8. Authorize LENA command L_HVP_COLP_CMD to command the positive collimator supply to level zero.

Check to make sure the number of sent commands has incremented by one **PASS_____**

9. Authorize LENA command L_HVP_COLN_CMD to command the negative collimator supply to level zero.

Check to make sure the number of sent commands has incremented by one **PASS_____**

10. Authorize LENA command L_HVP_OPT_EN to enable the optics supply.

11. Goto Nom2-HK screen (part of HK)

Check to make sure the optics enabled flag has tripped **PASS_____**

12. Authorize LENA command L_HVP_COLP_EN to enable the positive collimator supply

13. Goto Nom2-HK screen (part of HK)

Check to make sure the collimator positive enabled flag has tripped **PASS_____**

14. Authorize LENA command L_HVP_COLN_EN to enable the negative collimator supply.

15. Goto Nom2-HK screen (part of HK)

Check to make sure the collimator negative enabled flag has tripped **PASS_____**

Script lena_stims_on_amb

1. Authorize LENA command L_TOF_BIT_ON to turn on the LENA pulsers

2. Goto Nominal HK screen

Check to see that Built-in-test is "on" **PASS_____**

3. Goto Singles screen (Scince-2 on LENA-2 machine)

Check to make sure the stop count rate shows values around 300 **PASS_____**

4. Goto newtof2.scr (part of Event)

Check to make sure the tof spectrum has events in it **PASS_____**

Script lena_sff_hv_amb OR lena_sff_lv_amb (they are the same procedure)

1. Goto Normal HK Screen. Check:

LENA's software version is 31 **PASS_____**
LENA's program mode is "RAM" **PASS_____**

2. Goto ptest screen

Check status of Critical HK (should pass) **PASS_____**
Check status of TOF overcount (should pass) **PASS_____**
Check status of Memory (should pass) **PASS_____**

3. Note that the TOF subsystem test will probably fail and the two HVPS tests are not executed.

4. Authorize LENA command L_TOF_BIT_ON to turn on the LENA pulsers

5. Goto Nominal HK screen

Check to see that Built-in-test is "on" **PASS_____**

6. Goto Singles screen (Scince-2 on LENA-2 machine)

Check to make sure the stop count rate shows values around 300 **PASS_____**

7. Goto newtof2.scr (part of Event)

Check to make sure the tof spectrum has events in it **PASS_____**

8. Authorize the block of five no op commands.

9. Goto Nom HK screen.

Verify that the number of commands increases by five **PASS_____**

10. Authorize the block of twelve commands.

11. Goto Nom2-HK (part of HK)

a. L_SYS_HKQL_DSBL

Check that Quick Look is disabled **PASS_____**

b. L_SYS_HKDG_DSBL

Check that Diagnostic is disabled **PASS_____**

c. L_SYS_BIN_DSBL

Check that Science Binned Data Pack is disabled **PASS_____**

d. L_SYS_EVENT_DSBL

Check that Direct Events is disabled **PASS_____**

e. L_SYS_SNGLS_DSBL

Check that Singles are disabled **PASS_____**

12. Goto Nominal HK page

13. Look in the TOF Binning section

f. L_TOF_BIN_STRT1 BINDEF=10

Check that MASS 1 Beg is 10 **PASS_____**

g. L_TOF_BIN_STOP1 BINDEF=20

Check that MASS 1 End is 20 **PASS_____**

h. L_TOF_BIN_STRT2 BINDEF=40

Check that MASS 2 Beg is 40 **PASS_____**

i. L_TOF_BIN_STOP2 BINDEF=50

check that MASS 2 End is 50 **PASS_____**

14. Look at the General section

j. L_TOF_BIT_DELAY DELAY=2

Check that the Delay has been set to 2 **PASS_____**

k. L_TOF_TRSH_START CFDTRSH=12

Check to make sure that the TOF start threshold is at decimal level 12 **PASS_____**

l. L_TOF_TRSH_STOP CFDTRSH=13

Check to make sure that the TOF stop threshold is at decimal level 13 **PASS_____**

15. Authorize the block of thirteen commands.

16. Goto Nom2-HK (part of HK)

a. L_SYS_HKQL_EN

Check that Quick Look is enabled **PASS_____**

b. L_SYS_HKCM_EN
c. L_SYS_HKDG_EN

Check that Diagnostic is enabled **PASS_____**

d. L_SYS_BIN_EN

Check that Science Binned Data Pack is enabled **PASS_____**

e. L_SYS_EVENT_EN

Check that Direct Events is enabled **PASS_____**

f. L_SYS_SNGLS_EN

Check that Singles are enabled **PASS_____**

17. Goto Nominal HK page

18. Look in the TOF Binning section

g. L_TOF_BIN_STRT1 BINDEF=0

Check that MASS 1 Beg is 0 **PASS_____**

h. L_TOF_BIN_STOP1 BINDEF=127

Check that MASS 1 End is 127 **PASS_____**

i. L_TOF_BIN_STRT2 BINDEF=128

Check that MASS 2 Beg is 128 **PASS_____**

j. L_TOF_BIN_STOP2 BINDEF=255

check that MASS 2 End is 255 **PASS_____**

19. Look at the General section

k. L_TOF_BIT_DELAY DELAY=7

Check that the Delay has been set to 7 **PASS_____**

l. L_TOF_TRSH_START CFDTRSH=10

Check to make sure that the TOF start threshold is at decimal level 10 **PASS_____**

m. L_TOF_TRSH_STOP CFDTRSH=10

Check to make sure that the TOF stop threshold is at decimal level 10 **PASS_____**

Notes:

1. In the event one has difficulty finding the desired screen, one can always bring up the screen by selecting it from File-Open (should be ILENA directory)

2. Depending on the schedule, one may want to turn the recorder off after the relevant session.